# Failure of Bone Marrow to Reconstitute Lung Epithelium

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ONLINE DATA SUPPLEMENT

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**SUPPLEMENTAL FIGURES FOR ONLINE PUBLICATION:**

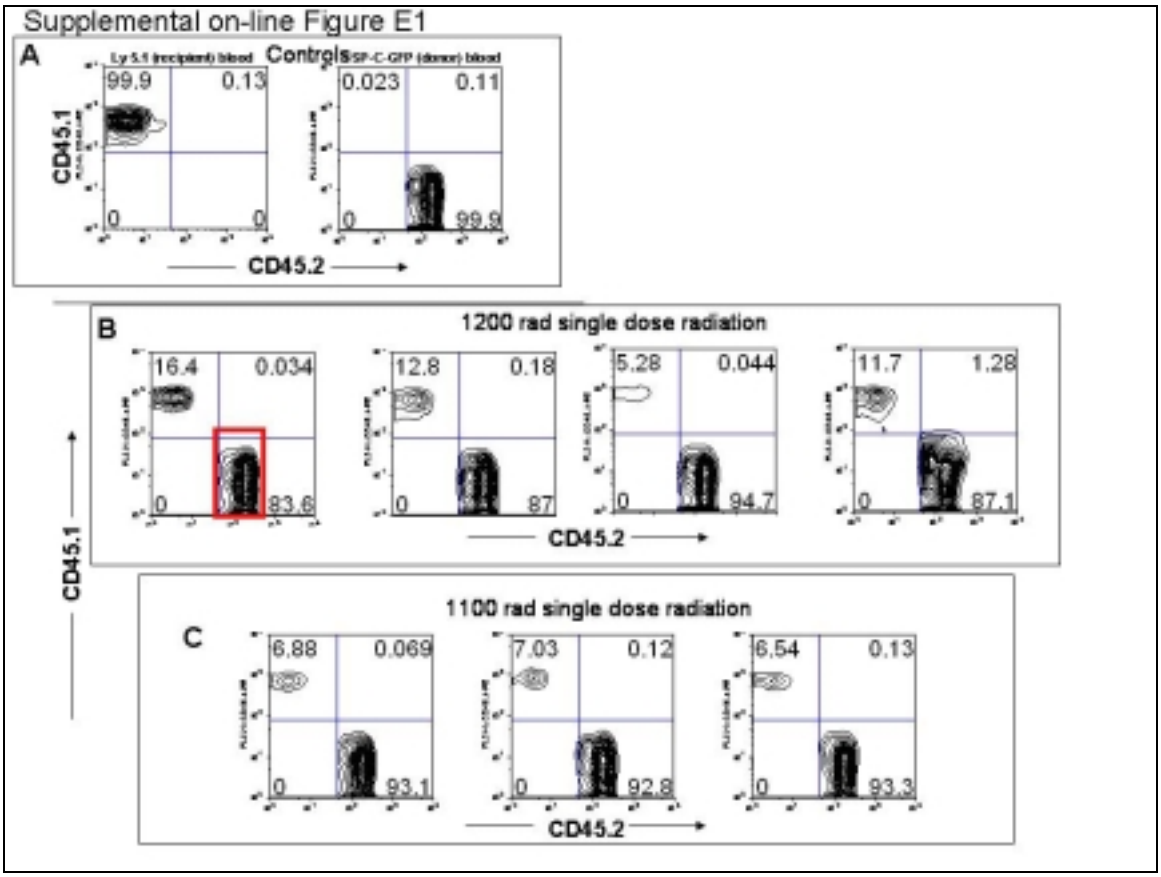


**Figure E1. Donor (CD45.2+) peripheral blood chimerism in 7 representative bone marrow transplant recipients 4 months after receiving varying doses of myeloablative radiation followed by transplantation of 10 million unfractionated bone marrow cells obtained from a SP-C-GFP lineage-specific reporter mouse.** (A) Blood from a wild-type mouse of recipient genotype (CD45.1) and a SP-C-GFP donor mouse (CD45.2) are shown as controls. (B) Peripheral blood from 4 recipients that underwent bone marrow transplantation utilizing a single radiation dose of 1200 rad (12Gy) is shown. Robust long-term hematopoietic reconstitution with donor-derived cells (CD45.2+/CD45.1-) is illustrated in each recipient (see red box for example). (C) 3 recipients transplanted after 1100 rad (11Gy) radiation dose are analyzed as in Panel B.

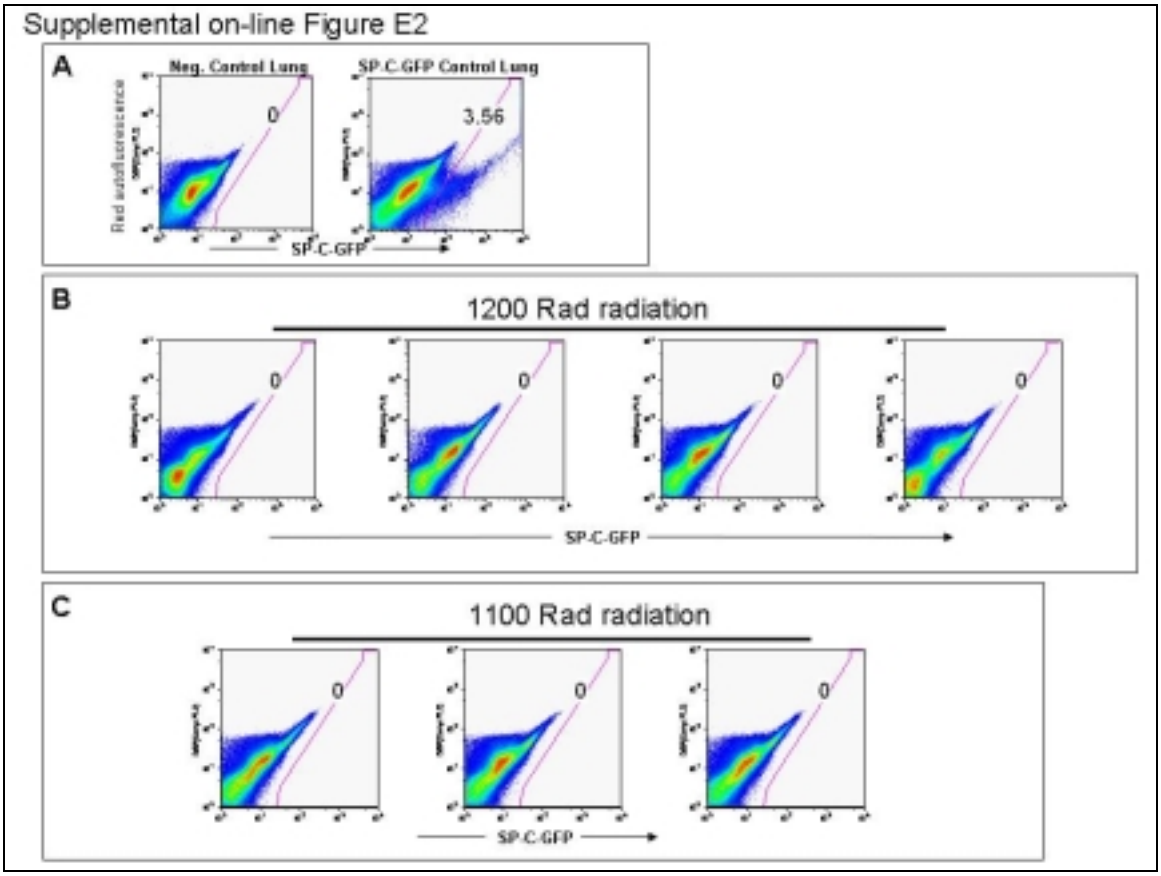


**Figure E2. Absence of AT2 cells derived from transplanted SP-C-GFP bone marrow cells.** FACS-analysis of $10^6$ lung cells from each of the mice from Figure E1 shows no engraftment as AT2 cells in any lung 4 months after bone marrow transplantation. The simultaneously prepared SP-C-GFP control lung shown in Panel A reveals 35,600 brightly GFP fluorescent AT2 cells present in the control sample (3.56% of 1 million cells analyzed).

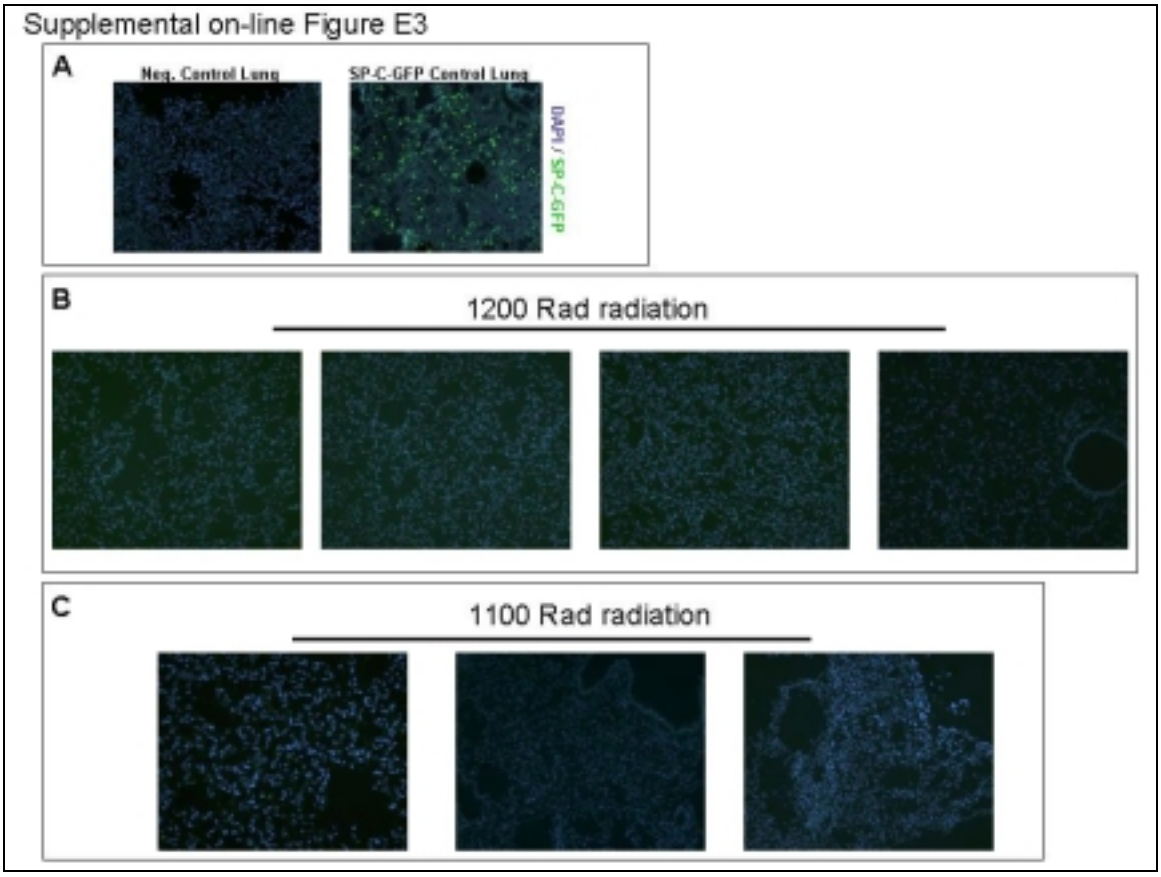


**Figure E3. Absence of AT2 cell engraftment after bone marrow transplantation confirmed by histologic analysis.** A representative lung frozen tissue section from each mouse confirms FACS results from Figure E2. In order to exclude autofluorescence a SP-C-GFP+ (*green*) fluorescent AT2 cell must meet strict criteria of fluorescing green but not red. Employing these criteria, no engraftment events were observed in any recipient (20 sections examined per recipient). In contrast the SP-C-GFP (positive control) mouse lung (Panel A) has more than 200 brightly fluorescent AT2 cells present per tissue section.

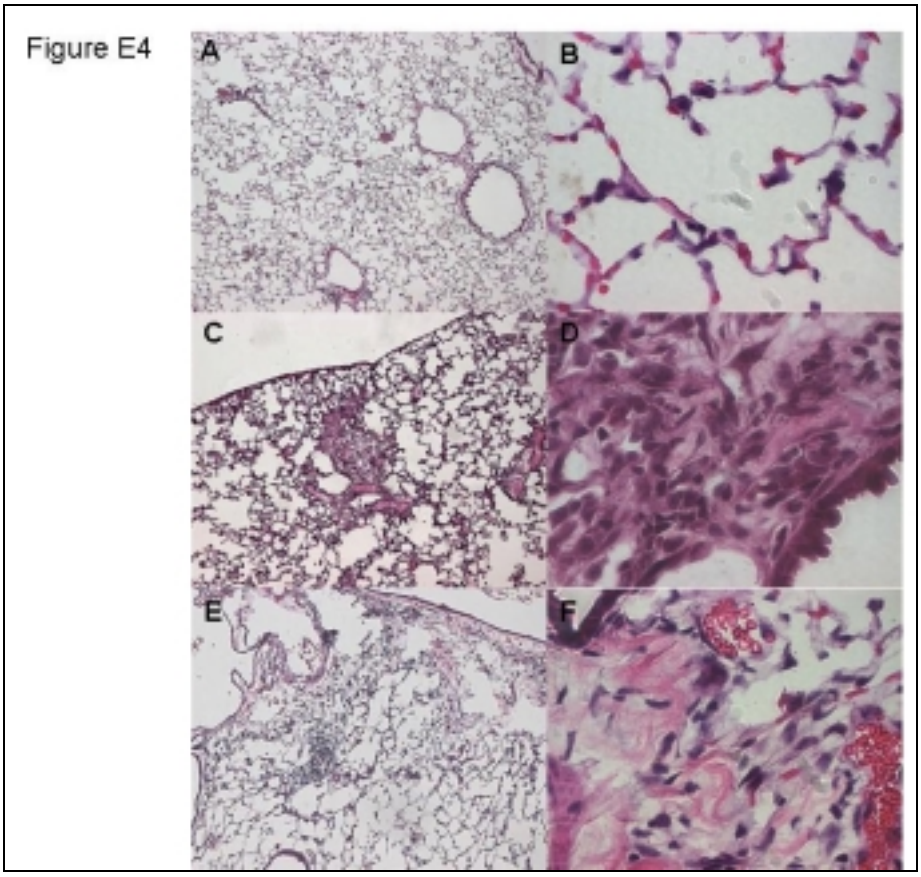


**Figure E4. Hematoxylin and eosin-stained frozen lung sections illustrating bleomycin-induced lung injury.** (A, B) Recipient lung tissue 4 months after bone marrow transplant showing relatively normal lung parenchyma at low (A) and high (B) magnifications. (C, D) Low and high magnification views of lung tissue from a control animal (untransplanted) 10 days after intra-tracheal bleomycin exposure showing inflammatory reaction surrounding an airway. (E) Representative low and high (F) magnification views of lung tissue 1 month after bleomycin exposure and 4 months after bone marrow transplantation from a SP-C-GFP donor mouse.